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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,973	01/25/2002	Tominari Araki	UNIU51.001AUS	3883

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EXAMINER

DICUS, TAMRA

ART UNIT PAPER NUMBER

1774

DATE MAILED: 07/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/056,973	ARAKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tamra L. Dicus	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 10-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Cancellation of claims 1-9 are acknowledged.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clear where the portion without ink is, on the optical member (claim 10) or the protective member (claim 11).

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-11, 13-21, 25-30, and 32-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shirota et al. in view of USPN 6654085 to Koike et al.

Shirota teaches an ink for use in ink jet recording in a multilayer optical element for liquid crystal displays. The ink forms colored ink (9) over glass or plastic plates (1) (optical member). Protective (10) covers ink (9). A non-colored portion (5) (without ink) is also shown. Ink (9) is equivalent to an arbitrarily formed component such as a character, figure, sign, or color (instant claims 48-51). See Figures 1D, 1F (shows the

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multilayer formation) and 2 (shows the aforesaid multilayer structure in a liquid crystal display). See also col. 8, lines 57-60 teaching the need for glass or plastic to be transparent. See Figure 2 also. The ink composition is disclosed in col. 6, lines 1-15 where a transmittance of 95% or more is a property, which falls within Applicant's range of no less than 90% and up to 100% and not less than 92%, 94% and 96% of transmittance without ink (claims 25-27 and 44-46). Shirota does not refer to ink that is used for identification, however, this goes to intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Additionally, ink is generally used to print information. Moreover, Shirota teaches the ink is for use in ink-jet recording, which would mean the ink is used for information. See col. 6, line 3. To instant claims 28 and 47, that an optical member is different with or without ink on it is provided for by Shirota because Shirota has ink on portions and non-ink portions, which is a difference.

While Shirota teaches a protective member (10), Shirota does not teach an easy-releasing protective member. Koike teaches a front scattering film with peelable substrate and peelable protective films (34) and (54) from optical retardation film (31) or optical polarizer film (51). See Figures 6-7 and Example 2. Because the peelable film is removed, it is considered easy-releasing. Koike teaches multilayer optical films described above are removable to laminate to liquid crystals to obtain a liquid crystal display. It would have been obvious to one of ordinary skill in the art to modify the multilayer optical element of Shirota to include an easy-releasing protective member

because Koike teaches such a easy-releasing protective member is required for transfer purposes like to a liquid crystal display for instance (Example 2).

Shirota does not teach an optical transmittance of a portion without ink in the protective member is no less than 80% (instant claims 11, 30). However, because the materials are the same, one with ordinary skill in the art would expect similar behavior, absent any evidence to the contrary.

Shirota does not teach an optical member comprising a polarizing plate or retardation plate, (instant claims 13, 20-21, and 39-40) or separator adhered to an optical member via an adhesive layer (instant claims 14-15 and 33-34). Koike teaches peelable protective films (34) and (54) adjacent optical retardation film (31) or optical polarizer film (51). Underlying polarizer (51) and retardation (31) is separators (33) and (53) with adhesives (32) and (52) lying therebetween. See Figures 6-7. It would have been obvious to one of ordinary skill in the art to modify the multilayer optical element of Shirota to further comprise:

- a polarizing or retardation plates to reflect light differently (col. 2, lines 15-35 of Shirota).
- separator and adhesive for transfer purposes to objects such as liquid crystal displays (Example 2 of Shirota).

Shirota does not teach the adhesive and easy-releasing member thicknesses as per instant claims 16-19 and 35-38. However, Koike teaches the adhesive thickness is 10 microns in Example 2, falling within Applicants range of between 1 and 500 microns of instant claims 16 and 35. It would have been obvious to one of ordinary skill in the art to modify the element of Shirota to include a thickness of the adhesive layer between 1

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and 500 microns because Koike teaches 10 microns is a conventional thickness (Example 2 of Koike). Shiota does not state the thickness of easy-releasing member (claims 17-19 and 36-38). However, it would have been obvious to one of ordinary skill in the art to produce a thickness as claimed, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. Thickness effects the strength.

Claims 22-24, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shiota et al. in view of USPN 6654085 to Koike et al. and further in view of USPN 4,812,034 to Mochizuki et al.

Shiota is relied upon above. Shiota does not teach a brightness-enhanced, linearly reflective polarizer, or chlosteric liquid crystal layer or plates of instant claims 22-24 and 41-43. Mochizuki teaches a projection type liquid crystal display device. Mochizuki uses a cholesteric-nematic phase transition type liquid crystal (equivalent to linearly reflective polarizer/chlosteric liquid crystal layer of instant claims 23-24 and 42-43) with positive dielectric anisotropy used in a projection type liquid crystal display device sealed between transparent substrates 13 and 14 and transparent electrodes 15 and 16 (col. 4, lines 9-20). See Figures 2a and 2b. Mochizuki provides the advantage of using this type of liquid crystal allows for a bright and high information contents display with a compact (equivalent to brightness-enhanced plate of instant claims 22 and 41), light, and low cost device and allows machinery input and thus simultaneous display at remote places, such as remote conference rooms or remote notice boards, in bright locations. The liquid crystal panel contains substrates. See Abstract, col. 2, lines 1-35, and col. 4, lines 37-40. It would have been obvious to one of ordinary skill in the art to

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modify the element of Shirota to include a linearly reflective polarizer and/or chlosteric liquid crystal layer because Mochizuki teaches including such material allows a bright and high information contents display with a compact, light, and low cost device and allows machinery input and thus simultaneous display at remote places, such as remote conference rooms or remote notice boards, in bright locations as cited above.

Claims 12 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,063,174 to Shirota et al. in view of USPN 6654085 to Koike et al. and further in view of USPN 5,856,048 to Tahara et al.

Shirota is relied upon above. Shirota does not teach an ink emits fluorescence. Tahara teaches information-recorded media and methods for reading the information comprising holograms and reflected layers. See Figure 1. A printed ink is formed of infrared fluorescent ink at col. 8, lines 54-55 and emits fluorescence at col. 9, lines 14-16. It would have been obvious to one of ordinary skill in the art to modify the element of Shirota to include fluorescent ink emitting fluorescence because Tahara teaches printed ink layers may add fluorescent pigments in order for the ink to emit fluorescence for easy discrimination from the rest of a recorded medium as taught by Tahara at col. 9, lines 12-55.

#### ***Response to Arguments***

4. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- USPN 6104530 to Okamura et al. teaches a transparent laminate having protective film in a LCD.
- USPN 6320042 to Michihata et al. teaches a polarizing plate having protective cellulose triacetate film.
- USPN 5547501 to Maruyama et al. teaches invisible ink for reading of invisible marking.
- USPN 4874227 to Matsukawa et al. teaches a LCD.
- USPN 6449093 to Hebrink et al. optical bodies.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is 571-272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tamra L. Dicus  
Examiner  
Art Unit 1774

July 12, 2004

A handwritten signature in black ink, appearing to read "Bruce Hess". The signature is fluid and cursive, with the first name "Bruce" and the last name "Hess" clearly distinguishable.

B. HAMILTON HESS  
PRIMARY EXAMINER